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ALPHARETTA, GA 30005				
EXAMINER				
CHN, PAUL T				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/722,187

Applicant(s)

CARMICHAEL, DANIEL T.

Examiner

PAUL T. CHIN

Art Unit

3652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 May 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 16-27, 29, 31 and 33-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 16-27, 29, 31 and 33-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of the species of Figs. 1B, 1D, 2A, 2B, 2D, and 2E, in the reply filed on March 2, 2007, is acknowledged.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-10, 16-18, 25-27, 29, 31, and 33-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There is no antecedent basis for "said lifting sling body" in claims 1, 25, and 29.

Applicant fails to clearly define "the sling body".

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-6, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Barber, Jr. et al. (5,460,883) (see PTO-892) in view of Marc Broekaert's article "polyurea coatings" (see PTO-892).

Barber, Jr. et al. (5,460,883) discloses a rope or a sling comprising a plurality of cores (12) (figs. 1-4), a coating material comprising at least an isocyanate mixed with an amine

forming polyureas (see Col. 9, lines 2-11, see from Col. 11, line 65, to Col. 12, line 12), wherein the coating material has a predetermined thickness. Barber, Jr. et al. (5,460,883) does not clearly show a polyurea coating. However, Broekaert's article teaches polyurea coatings comprising at least an isocyanate mixed with an amine forming polyureas (see the attached article). Thus, it would have been obvious to those skilled in the art to provide a polyurea coating on the Barber, Jr. et al. as taught by Broekaert's article to employ a safe and reliable sling. Note that applicant broadly recites the functional limitations such as to achieve desired operational properties of the sling or cable, and Barber, Jr. et al. (5,460,883) is capable of performing the functional limitations such as material selection, temperature, material strength, and so forth. Re claims 2,5, and 6, the coating material of Barber, Jr. et al. (5,460,883) is selected from one of the group, polyurethane or a polyester (see from Col. 11, line 65, to Col. 12, line 12). Barber, Jr. et al. (5,460,883), as presented above, does not clearly teach the operating temperature and the strength of the coating material. However, it would have been obvious to those skilled in the art to provide a reasonable operating temperature, which is below a melting point, and a desired tensile strength on the Barber, Jr. et al. (5,460,883) to provide a reliable and operable device.

6. Claims 1-6, 16, 18, 33, 34, and 37, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over St. Germain (5,651,572) (see IDS) in view of either Bassani (4,098,861) (see PTO-892) or Marc Broekaert's article "polyurea coatings"(see PTO-892) .

St. Germain (5,651,572) discloses a lifting sling comprising a plurality of core strands (7,8) (Figs. 4 and 5), with fiber optics signal means (2,2'), to monitor the sling with a pre-failure indicator, but does not clearly teach a coating material comprising at least an

isocyanate mixed with an amine forming polyureas. However, Bassani (4,098,861) teaches a coating material comprising at least an isocyanate mixed with an amine forming polyurethane (see col. 4, lines 9-35). Broekaert's article also teaches polyurea coatings comprising at least an isocyanate mixed with an amine forming polyureas (see the attached article). Thus, it would have been obvious to those skilled in the art to provide a coating on the St. Germain (5,651,572) as taught by either Bassani (4,098,861) or Broekaert's article to employ a safe and reliable sling.

Re claims 3 and 4, Bassani (4,098,861) teaches the temperature of the components ranges from 80 to about 200 C degrees and the pressure ranges from about 200 psi to about 3500 psi (col. 3, lines 48-52). Thus, it would have been obvious to those skilled in the art to provide a reasonable operating temperature, which is below a melting point, and a desired tensile strength on the Bassani (4,098,861) or Barber, Jr. et al. (5,460,883) to provide a reliable and operable St. Germain's sling.

Re claims 5 and 6, Bassani (4,098,861) teaches a coating material comprising at least an isocyanate mixed with an amine forming polyurethane (see col. 4, lines 9-35). Barber, Jr. et al. (5,460,883) also teaches a coating material comprising at least an isocyanate mixed with an amine forming polyureas (see Col. 9, lines 2-11, see from Col. 11, line 65, to Col. 12, line 12), a polyurethane or a polyester (see from Col. 11, line 65, to Col. 12, line 12).

Re claims 16 and 18, St. Germain (5,651,572) also teaches optical signal strand members (2,2'), which is a safety core, to monitor or detect the sling (see col. 3, lines 7-62) with a pre-failure indicator (see col. 4, lines 10-20). Also note that one of the cores or strands (7,8) could be considered as a safety member.

7. Claim 17, as best understood, is rejected under 35 U.S.C. 103(a) as being unpatentable over St. Germain (5,651,572) (see IDS) and either Bassani (4,098,861) or Marc Broekaert's article "polyurea coatings", as applied to claims 1,16, and further in view of Smith et al. (6,443,660) (see PTO-892).

The modified St. Germain's sling (5,651,572), as presented above, does not specifically teach an electronic system having a plurality of data processing device or a plurality of global network based data processing resources. However, Smith et al. (6,443,660) teaches a lifting sling (34) (see Fig. 3) and an electronic monitoring system comprising signaling means, data recording display system, monitor data, digital readout device, analog readout device, or a computer (see col. 5, lines 34-50) to monitor the lifting sling (34). Thus, it would have been obvious to those skilled in the art to provide an electronic monitoring system to connect to the St. Germain's sling (5,651,572) as taught by Smith et al. (6,443,660) to monitor the integrity of the sling and provide a signal to a user.

Allowable Subject Matter

8. Claims 25 and 29 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.
9. Claims 7-10, 26, 27, 31, 35, 36, and 38 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments with respect to claims 1-10, 16-18, 25-27, 29, 31, and 33-38, have been considered, but they are not persuasive.

In response to applicant's argument that "the prior art does not teach high crush and shear forces", a recitation of the intended use of the claimed invention must result in a

structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

Applicant also argues that prior art does not teach or suggest "a plurality of core fibers forming said lifting sling body" and "high crush and shear forces".

Claim 1 recites "a plurality of additional layers applied to areas of said lifting body". To those skilled in the sling and coating art would apply the coating of Broekaert's article to the sling of Barber or St. Germain.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAUL T. CHIN whose telephone number is (571) 272-6922. The examiner can normally be reached on MON-THURS (7:30 -6:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saul Rodriguez can be reached on (571) 272-7097. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PAUL T. CHIN/
Primary Examiner, Art Unit 3652